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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/855,905	05/14/1997	MASAAKI YAMANAKA	443-17	2320

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EXAMINER


KRUER, KEVIN R

ART UNIT	PAPER NUMBER
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1773

DATE MAILED: 03/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 08/855,905	Applicant(s) YAMANAKA ET AL. 	
	Examiner Kevin R Kruer	Art Unit 1773	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 November 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 28-49 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 28-49 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

1. The rejection of claims under 35 U.S.C. 112, first paragraph, for containing the limitation "gloss of 60% or below" has been overcome by amendment.
2. The rejection of claims under 35 U.S.C. 112, first paragraph, for containing the limitation "opacity of 83% or above" has been overcome by amendment.

Claim Rejections - 35 USC § 103

1. Claims 1 and 28-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takashi et al. (US 4,318,950) and further in view of Ohba et al. (US 5,233,924) and European Patent 0 613 919 A1 (herein referred to as Ueda).

Takashi discloses that it is well known in the art to make synthetic papers comprising oriented thermoplastic laminates. Inorganic fillers may be added to the thermoplastic resin prior to stretching in order to roughen the surface and render the film receptive to pencil, pen, and crayon markings (col 1, lines 19-46). It is also well known in the art that antistatic properties are desired in synthetic paper products.

Takashi teaches that a composition comprising inorganic fillers and a propylene matrix (col 7, line 63) are useful in making synthetic paper. Inorganic fillers comprise 0.5%-65*% of the composition (col 7, lines 8-10) and may be selected from the group consisting of calcium carbonate, silica, talc, titanium oxide, and clay (col 7, lines 1-4). The composition may further comprise an anti-static agent (col 8, lines 20-60, and the

examples). Such agents are commonly added to synthetic papers in order to make the film more ink receptive during printing. The polypropylene composition containing inorganic filler is uniaxially oriented at least 2.5 times the original dimension, and possibly as high as 16 times the original dimension (col 5, lines 8-17). It is well known in the art to orient the film at a temperature lower than the melting point of the polypropylene resin. The film is stretch so that the void content is between 10-65% (claim 1, equation is in Table VIIN col 17). The stretched film may be surface treated with corona discharge treatment at a voltage of 3,000 to 30,000 volts and a current of 0.5 to 5 amperes (col 4, lines 41-51). The polypropylene composition may be laminated to a biaxially oriented backing film layer (abstract). The thickness of such a laminate may be 30-140um, wherein the polypropylene composition has a thickness of 10-100um (Table IV, col 14).

With respect to the gloss limitation of claim 1, all the examples taught in Takashi have a gloss of 60% or less (see Tables VII (a) and VII(b)).

With regard to the opacity limitation of claim 1, Takashi does not teach the desired level of opacity of a synthetic paper. However, Ohba teaches a synthetic paper comprising a polyolefin matrix filled with inorganic filler, wherein the opacity of the film is desirably at least 80% (abstract) because such an opacity is sufficient for writing with a pencil (col 1, lines 6-12). Therefore, the examiner takes the position that it would have been obvious to one of ordinary skill in the art to alter the opacity of the film taught in Takashi so its above 80% because such an opacity is sufficient for writing with a pencil.

Takashi teaches the use of an anti-static agent in a synthetic paper polypropylene composition, but does not teach the claimed antistatic composition. However, Ueda teaches an antistatic which may be utilized in a polypropylene composition (page 9, lines 34-42). The composition taught in Ueda comprises:

- component A: a polyolefin resin (55-95% by weight of the total composition)
- component B: a polyetheresteramide antistatic agent (3-40% by weight)
- component C: a polyamide resin (1-20% by weight), and
- component D: a compatilizer (0.2-20%)

The polyetheresteramide is derived from a polyamide oligomer having a number average molecular weight of 300 to 3,000 and which contains carboxyl groups at each end and an alkylene oxide adduct of bisphenol having a number average molecular weight of from 300 to 5,000 (claim 1). For example, the polyetheresteramide can be synthesized from an s-caprolactam, an ethylene oxide adduct of bisphenol & and adipic acid (page 12, example 1). Furthermore, Iz-aminodecanoic acid may be used as the polyamide oligomer in place of the s-caprolactam (page 3, lines 2 1-29). Ueda teaches that polyetheresteramides having aromatic rings as component B have a reduced viscosity of from 0.5 to 4.0 in 0.5 % m-cresol solution at 250C (page 4, lines 21-24). It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the antistatic agent taught in Ueda in the synthetic paper taught in Takashi because the polyetheresteramide is known to be compatible with polypropylene, heat resistance, maintains its antistatic properties permanently (abstract), and does not rinse away in the presence of water.

Furthermore, it would have been obvious to utilize the polyetheresteramide in the amounts taught in Ueda because Ueda teaches that such amounts are sufficient for providing polypropylene matrixes with antistatic properties. Ueda further teaches that the polyamide of component C increases the surface orientation of the polyetheresteramide (col 6, lines 38-47). The polyamide is selected from the group consisting of nylon 66, nylon 69, nylon 601, nylon 612, nylon 6, nylon 11, nylon 12, and nylon 46 (page 5, lines 21-22). Preferably the polyamide resin has a reduced viscosity of from 0.8 to 5 in 97% sulfuric acid (concentration 11100m1) at 30OC (page 5, lines 22-25). Thus, it would have been obvious to one of ordinary skill in the art to add sufficient amounts of the polyamide taught in Ueda to the synthetic paper taught in Takashi in order to increase the surface orientation of the polyetheresteramide.

Ueda also teaches that a compatilizer is preferably utilized in order to improve compatibîlity with the resin, prevent interlaminar peeling of molded articles obtained, and improve the mechanical strength and appearance of the final product (col 6, lines 55-61). When polypropylene is utilized as the thermoplastic matrix, preferred compatilizers include (a) an acid modified low molecular weight polyolefn having a number average molecular weight of from 800-25, 00 and an acid number of from 5-150, (b) a hydroxy modified low molecular weight polyolefin having a number average molecular weight of from 800 to 2. 5,000 and a hydroxy value of from 5 to 150, and c) an ester modified low molecular weight polyolefin obtained by partily or wholly esterifing an acid modified low molecular weight polyolefin with a polyoxyalkylene compound and having a number average molecular weight of from 1,000-28,000 (page 7, lines 21-29).

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Such a compatilizer may be obtained by reacting a low molecular weight polyolefin having a number average molecular weight from 700 to 20,000 with an unsaturated acid selected from methacrylic acid, maleic acid, maleic anhydride, fumaric acid, itaconic acid, itaconic anhydlide, and citraconic anhydride (page 7, lines 30-39). The resulting product can be reacted further a) with an aliphatic amine selected from monomethanolamine, monoisopropanolamine, diethanolamine, and diisopropanolamine (page 7, lines 48-52), or b) by esterifying part or all of the carboxylic acid moieties of the modified low molecular weight polyolefin with a hydroxylated polyoxylalkylene compound (page 7, line 53 - page 8, line 9). The examiner takes the position that it would have been obvious to one of ordinary skill in the art to incorporate the compatilizers taught in Ueda in their taught amounts into the synthetic paper taught in Takashi in order to improve compatibility with the resin, prevent interlaminar peeling of molded articles obtained, and improve the mechanical strength and appearance of the final product (col 6, lines 55-61).

Response to Arguments

Applicants' arguments filed November 14, 2003, have been fully considered but they are not persuasive.

Applicant has summarized the prosecution of the present application to demonstrate that "unobvious advantages of the claimed invention have indeed been documented." The examiner will comment upon each of applicant's enumerated points, referring back to Applicant's reference number for each.

With regard to point (i), the manner in which Takashi and Ueda are combined has been altered since the Office Action mailed May 20, 1999. Therefore, the discussion of said office action is irrelevant to the current rejection.

For a full discussion of the first declaration by inventor Maskai Yamanaka filed October 6, 1999, Applicant's attention is directed to the Office Action mailed on December 27, 1999.

The examiner disagrees with Applicant's synopsis (point iii) of the Examiner's evaluation of the Supplemental Declaration executed by Masaki Yamanaka on March 2, 2001. For a full discussion of said declaration, Applicant's attention is directed to the Office Action mailed on April 30, 2001.

The examiner also disagrees with Applicant's synopsis (point iv) of the Examiner's evaluation of the Second Supplemental Declaration executed by Masaki Yamanaka on July 12, 2002. For a full discussion of said declaration, Applicant's attention is directed to the Office Action mailed on January 27, 2003.

Applicant argues (point v) that the examiner contradicts himself by dismissing the Yamanaka III Declaration by first stating Takashi et al is relied on to teach a biaxially oriented polyolefin composition useful as paper with Ueda teaching the antistatic component, and then stating Ueda et al are not limited to molded compositions. The examiner does not understand why these two statements are considered contradictory. The examiner pointed out that the teachings of Ueda are not limited to molded compositions. Therefore, the teachings of Ueda are relevant to the problems/teachings of Takashi.

For a full discussion of the third Supplemental Declaration executed by Masaaki Yamanaka on May 19, 2003, Applicant's attention is directed to the examiner's comments in the Office Action mailed July 11, 2003.

Applicant argues that the Examiner is merely picking and choosing selected portions of each reference with no regard to even the slightest suggestion of combining the two reference. The examiner respectfully disagrees with Applicant's conclusion. Takashi is relied upon to teach a synthetic paper comprising an antistatic agent. Ueda is relied upon to teach the claimed antistatic agent and to provide motivation for adding said antistatic agent to the synthetic paper of Takashi. The examiner does not consider utilizing the teachings of Ueda to motivate one of ordinary skill in the art to change the antistatic agent taught in Takashi to be "picking and choosing."

Applicant further argues (point (viii)) that the examiner's comments in the July 11, 2003 Office Action directly contradict assertions by the Examiner in previous Office Actions that Ueda is only relied upon for teaching the antistatic agent and not any other component. In the July 11, 2003 Office Action the examiner stated,

"Yamanaka performed a third experiment in which the same procedure of Example 12 of Takashi was performed except for changing the low molecular weight antistatic agent to 20 parts by weight of polyetheresteramide. Said example has a small effect of improving antistatic properties because of the poor dispersibility of the polyetheresteramide and poor offset printability. However, the third experiment is not representative of a paper rendered obvious by Takashi in view of Ueda. Specifically, Ueda teaches that b2 is necessarily present (see claim 1) and claimed components C, and D are desirably present"

The examiner does not understand how this comment contradicts previous comments. The examiner is noting that third experiment of the declaration was not

representative of Takashi in view of Ueda because Ueda teaches that claimed component b2 is necessarily present and components C and D are preferably present.

With regard to point ix, Applicant argues that b2 is clearly present in the antistatic agent component of the inventive paper. The examiner never took the position that the antistatic agent did not include b2. The examiner merely took the position that Ueda taught component b2.

Thus, Applicant's arguments are not persuasive.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin R Kruer whose telephone number is 571-272-1510. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Thibodeau can be reached on 571-272-1516. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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